

BIOGRAPHICAL SKETCH

NAME Chong S. Kim	POSITION TITLE Senior Research Scientist
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EDUCATION (*Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Seoul National University, Seoul, South Korea	B.S.	1968	Mechanical Engineering
University of Wisconsin, Madison, WI	M.S.	1973	Thermo-Fluid Dynamics
University of Minnesota, Minneapolis, MN	Ph.D.	1978	Fine Particle Technology

PROFESSIONAL EXPERIENCE

1996-pre. Senior Research Scientist, National Health & Environmental Effects Research Laboratory, U.S. EPA, RTP, NC
2001-pre. Adjunct Professor, Department of Environ. Sci. & Engineering, UNC School of Public Health, Chapel Hill, NC
2001-pre. Adjunct Professor, Dep't of Mechanical & Aerospace Engineering, North Carolina State University, Raleigh, NC
2000-pre. Adjunct Professor, Department of Medicine, University of North Carolina School of Medicine, Chapel Hill, NC
1997-2000 Adjunct Associate Professor, Dep't of Mech. & Aerospace Eng., North Carolina State University, Raleigh, NC
1991-2000 Adjunct Associate Professor, University of North Carolina School of Medicine, Chapel Hill, NC
1993-1995 Chief, Human Dosimetry Section, Health Effects Research Lab., US EPA, Research Triangle Park, NC
1990-1992 Research Physical Scientist, Health Effects Research Lab., U.S. EPA, Research Triangle Park, NC
1986-1990 Adjunct Associate Professor, Department of Medicine, University of Miami School of Medicine, Miami, FL
1980-1990 Director, Aerosol Research Laboratory, Pearlman Biomedical Research Institute, Miami Beach, FL
1987 Visiting Scientist, Institute of Clinical Physiology, University of Pisa Medical School, Pisa, Italy
1980 Visiting Scientist, GSF-Institute of Biophysics and Radiation Research, Frankfurt, Germany
1978-1980 Aerosol Research Specialist, Pulmonary Division, Mount Sinai Medical Center, Miami Beach, FL
1973-1978 Research Assistant, Particle Technology Laboratory, University of Minnesota, Minneapolis, MN
1970-1971 Research Engineer, Heat Transfer Laboratory, Atomic Energy Research Institute, Seoul, South Korea

SELECTED AWARDS AND HONORS

2005 US EPA NHEERL Environmental Research Leadership Award
2003 Gold Medal, US EPA Honor Award
2002 Chair of Annual Conference, American Association for Aerosol Research
2001 US EPA Scientific and Technological Achievement Award (Level II and III)
1997 US EPA Scientific and Technological Achievement Award (Level III)
1994 Presidential Meritorious Showcase Plenary Presentation, ATS International Conference

SCIENTIFIC COMMITTEES, CONFERENCES AND CONSULTANT APPOINTMENTS

2006 Member, Scientific Advisory Committee, 7th International Aerosol Conference, St. Paul, MN
2006 Organizer, Special Symposium on Nanoparticle Dosimetry, Toxicology and Cellular Interactions, 7th International Aerosol Conference, St. Paul, MN.
2005 Editor, Aerosol Science and Technology (1998-2004, Editorial Board)
2005 Session chair, Lung Deposition and Modeling, 24th AAAR Annual Conference, Austin, TX, 2005.
2004 Organizer, Special Symposium on Micro-dosimetry and Targeting of Inhaled Particles and Drug Aerosols, 23rd American Association for Aerosol Research (AAAR) Annual Conference, Atlanta, GA.
2004 Member, Board of Directors, American Association for Aerosol Research
2002 Conference Chair, 21st AAAR Annual Conference, Charlotte, NC.
2002 Session chair, Respiratory deposition symposium, 6th International Aerosol Conference, Taipei, Taiwan.
2001 Session chair, Respiratory deposition session, 20th AAAR Annual Conference, Portland, OR.
2000 Organizer, Special Symposium on Respiratory Particle Deposition, 19th AAAR Annual Conference, St. Louis, MO.
1998 Member, Editorial Board, Journal of Aerosol Medicine (-present)

SELECTED INVITED LECTURES, SYMPOSIA AND WORKGROUPS

2004 Tutorial Lecture, 23rd Annual Conference of AAAR
2003 Speaker, EPA Workshop on Inhalation Risk Assessment - A Superfund Focus
2002 Tutorial Lecture, Sixth International Aerosol Conference, Taipei, Republic of China.
2001 Speaker, Second Asian Aerosol Conference, Busan, South Korea.
2001 Speaker, Annual Conference of Society of Toxicology, San Francisco, CA.

2000 Seminar Speaker, Harvard School of Public Health, Center for Ambient Particle Health Effects, Boston, MA.
 2000 Speaker, National Science Foundation, US-Europe Joint Workshop on Nanoparticle Technology, Dublin, Ireland.
 2000 Speaker, The Royal Society. Discussion Meeting on Ultra Fine Particles in the Atmosphere. London, UK.

Principal Investigator/Program Director (Last, first, middle):

SELECTED PUBLICATIONS (Out of 93)

- Zhang Z, Kleinstreuer C and **Kim CS**. Transport and uptake of MTBE and ethanol vapors in a human upper airway model. *Inhal. Toxicol.* 18:169-184, 2006.
- Zhang Z, Kleinstreuer C and **Kim CS**. Water vapor transport and its effects on the deposition of hygroscopic droplets in a human upper airway model. *Aerosol Sci. Technol.* 40:1-16, 2006
- Kim, C. S.** and Jaques, P. A. Total lung deposition of ultrafine particles in elderly subjects during controlled breathing. *Inhal. Toxicol.* 17:387-399, 2005.
- Zhang, Z., Kleinstreuer, C., Donohue, J. F. and **Kim, C. S.** Comparison of micro- and nano-size particle deposition in a human upper airway model. *J. Aerosol Sci.* 36:211-233, 2005.
- Shi, H., Kleinstreuer, C., Zhang, Z. and **Kim, C. S.** Nano-particle transport and deposition in bifurcating tubes with different inlet conditions. *Physics of Fluids* 16:2199-2213, 2004.
- Kim, C. S.** and Jaques, P. A. Analysis of total respiratory deposition of inhaled ultrafine particles in adult subjects at various breathing patterns. *Aerosol Sci. Technol.* 38:525-540, 2004
- Rosati, J.A., Leith, D. and **Kim, C. S.** Monodisperse and polydisperse aerosol deposition in a packed bed. *Aerosol Sci. Technol.* 37:528-535, 2003.
- Goo, J. and **Kim, C. S.** Theoretical analysis of deposition of inhaled particles in human lungs considering stochastic variations of airway morphology. *J. Aerosol Sci.* 34:585-602, 2003
- Zhang, Z., Kleinstreuer, C. and **Kim, C. S.** Micro-particle transport and deposition in a human oral airway model. *J. Aerosol Sci.* 33:1635-1652, 2002
- Zhang, Z., Kleinstreuer, C. and **Kim, C. S.** Aerosol deposition efficiencies and upstream release positions for different inhalation modes in an upper bronchial airway model. *Aerosol Sci. Technol.* 36:828-844, 2002
- Segal, R. A., Martonen, T. B., **Kim, C. S.** and Shearer M. Computer simulations of particle deposition in the lungs of chronic obstructive pulmonary disease patients. *Inhalation Toxicology* 14:705-720, 2002
- Zhang, Z., Kleinstreuer, C. and **Kim, C. S.** Cyclic micron-size particle inhalation and deposition in a triple bifurcation lung airway model. *J. Aerosol Sci.* 33:257-281, 2002.
- Comer, J. K., Kleinstreuer C. and **Kim, C. S.** Flow structures and particle deposition patterns in double bifurcation airway models: Part 2. Aerosol transport and deposition. *J. Fluid Mechanics* 435:55-80, 2001
- Goo, J. and **Kim, C. S.** Analysis of aerosol bolus dispersion in a cyclic tube flow by finite element method. *Aerosol Sci. Technol.* 34:321-331, 2001.
- Jaques, P and **Kim, C.S.** Measurement of total lung deposition of inhaled ultrafine particles in healthy men and women. *Inhalation Toxicology*, 12:715-731, 2000.
- Kim, C. S.** and P. Jaques. Respiratory dose of inhaled ultrafine particles in young adults. *Phil. Trans. Roy. Soc. London A.* 358:2693-2705, 2000
- Kim, C. S.** Methods of calculating lung delivery and deposition of aerosol particles. *Respir. Care* 45:696-711, 2000
- Segal, R. A., Martonen, T. B. and **Kim, C. S.** Comparison of computer simulation of total lung deposition to human subject data. *J. Air Waste Manage. Assoc.* 50:1262-1268, 2000
- Kim, C. S.** and Fisher, D. M. Deposition characteristics of aerosol particles in sequentially bifurcating airway models. *Aerosol Sci. Technol.* 31:198-220, 1999.
- Kim, C.S.**, and S.C. Hu. Regional deposition of inhaled particles in human lungs: comparison between male and female. *J. Appl. Physiol.* 84:1834-1844, 1998
- Kim, C.S.**, and C.W. Kang. Comparative measurement of lung deposition of inhaled fine particles in normals and patients with obstructive airway disease. *Am. J. Respir. Crit. Care Med.* 155:899-905, 1997
- Bennett, W.D., K.L. Zeman, **C.S. Kim**, and J. Mascarella. Enhanced deposition of fine particles in COPD patients spontaneously breathing at rest. *Inhalation Toxicol.* 9:1-14, 1997
- Kim, C.S.**, S.C. Hu, P. DeWitt, and T.R. Gerrity. Assessment of regional deposition of inhaled particles in human lungs by serial bolus delivery method. *J. Appl. Physiol.* 81:2203-2213, 1996.
- Bennett, W.D., K.L. Zeman, and **C.S. Kim**. Variability of fine particle deposition in healthy adults: effect of age and gender. *Am. J. Respir. Crit. Care Med.* 153:1641-1647, 1996.
- Kim, C.S.**, D.M. Fisher, D.J. Lutz, and T.R. Gerrity. Particle deposition in bifurcating airway models with varying airway geometry. *J. Aerosol Sci.* 25:567-581, 1994
- Kim, C.S.**, and L. Garcia. Particle deposition in cyclic bifurcating tube flow. *Aerosol Sci. Technol.* 14:302-315, 1991.
- Kim, C.S.**, W.M. Abraham, G.A. Chapman, and M.A. Sackner. Enhanced aerosol deposition in the lung with mild airways obstruction. *Am. Rev. Respir. Dis.* 139:422-426, 1989.
- Kim, C.S.**: Aerosol deposition in the lung with obstructed airways. *J. Aerosol Med.* 2:111-120, 1989.
- Kim, C.S.**, M.A. Eldridge, L. Garcia, and A. Wanner. Aerosol deposition in the lung with asymmetric airways obstruction: in vivo observation. *J. Appl. Physiol.* 67:2579-2585, 1989.
- Kim, C.S.**, G.A. Lewars, and M.A. Sackner. Measurement of total lung aerosol deposition as an index of lung abnormality. *J.*

Appl. Physiol. 64:1527-1536, 1988.

Kim, C. S., Iglesias, A. J., and Sackner, M. A. Mucus clearance by two-phase gas-liquid flow mechanism: Asymmetric periodic flow model. *J. Appl. Physiol.* 62:959-971, 1987.